Claims

In the claims:

1   1.   A method comprising:

2   receiving an incoming call at an automated attendant port;

3   receiving a call handle associated with the incoming call;

4   applying the call handle to retrieve caller information associated with the call

5   handle; and

6   using the retrieved caller information to handle the call if caller information

7   associated with the call handle is found.

1   2.   The method of claim 1, wherein receiving a call handle comprises

2   receiving a tone sequence at the automated attendant port, decoding the tone sequence,

3   and deriving the call handle from the decoded tone sequence.

1   3.   The method of claim 1, wherein the tone sequence is a DTMF tone

2   sequence transmitted to the port over the same transmission line as the incoming call.

1   4.   The method of claim 1, wherein receiving a call handle comprises

2   receiving a call handle message through a digital interface.

1   5.   The method of claim 1, wherein the digital interface comprises a digital

2   backplane connection to a switch from which the incoming call was received.

1   6.   The method of claim 1, wherein receiving an incoming call comprises

2   receiving an incoming call from a switch and wherein receiving a call handle comprises

3   receiving a call handle from the switch.

1   7.   The method of claim 1, wherein using the retrieved caller information

2 comprises providing audio information in a language previously selected by the caller.

1   8.   The method of claim 1, if no caller information associated with the call

2 handle is found, further comprising:

3   requesting caller information from the caller;

4   storing received caller information in association with the call handle; and

5   using the received caller information to handle the call.

1   9.   The method of claim 1, further comprising receiving an indication of

2 whether the call is a forwarded call and wherein retrieving caller information and using

3 the retrieved information are performed only if the call is a forwarded call.

1   10.   The method of claim 9, if the call is not a forwarded call, further

2 comprising:

3   requesting caller information from the caller;

4   storing received caller information in association with the call handle; and

5   using the received caller information to handle the call.

1   11.   A machine-readable medium having stored thereon data representing

2 instructions which, when executed by a machine, cause the machine to perform

3 operations comprising:

4   receiving an incoming call at an automated attendant port;

5   receiving a call handle associated with the incoming call;

6   applying the call handle to retrieve caller information associated with the call

7 handle; and

8   using the retrieved caller information to handle the call if caller information

9 associated with the call handle is found.

1   12.   The medium of claim 11, wherein if no caller information associated with

2 the call handle is found, the instructions, when executed by the machine, cause the

3 machine to perform further operations comprising:

4   requesting caller information from the caller;

5   storing received caller information in association with the call handle; and

6   using the received caller information to handle the call.

1   13.   The method of claim 11, wherein if the call is not a forwarded call, the

2 instructions, when executed by the machine, cause the machine to perform further

3 operations comprising:

4   requesting caller information from the caller;

5   storing received caller information in association with the call handle; and

6   using the received caller information to handle the call.

1   14.   An apparatus comprising:

2   an automated attendant port to receive an incoming call;

3   an automated attendant port to receive a call handle associated with the incoming

4 call;

5   a memory containing caller information associated with call handles; and

6   a processor to apply the call handle to retrieve caller information and use the

7   retrieved caller information to handle the call if caller information associated with the call

8   handle is found.

1   15.   The apparatus of claim 14, wherein the automated attendant port to receive

2   the call handle comprises a digital interface.

1   16.   The apparatus of claim 15, wherein the digital interface comprises a digital

2   backplane connection to a switch from which the incoming call was received.

1   17.   A method comprising:

2   receiving an incoming call;

3   generating a call handle for the incoming call;

4   routing the incoming call to a port of a call handling system;

5   sending the call handle to the call handling system in association with the routed

6   call;

7   receiving a transfer of the routed call from the call handling system;

8   re-routing the incoming call back to a port of the call handling system; and

9   sending the call handle to the call handling system in association with the re-

10   routed call.

1   18.   The method of claim 17, wherein sending the call handle comprises

2   deriving a tone sequence for the identification, coding the tone sequence into tones and

3   sending the tone sequence to the call handling system port.

1   19.   The method of claim 17, wherein the tone sequence is a DTMF tone

2   sequence transmitted to the call handling system port over the same transmission line as

3   the incoming call.

1   20.   The method of claim 17, wherein sending the call handle comprises

2   sending an identification message through a digital interface.

1   21.   The method of claim 17, wherein the digital interface comprises a digital

2   backplane connection to the call handling system.

1   22.   A machine-readable medium having stored thereon data representing

2   instructions which, when executed by a machine, cause the machine to perform

3   operations comprising:

4   receiving an incoming call;

5   generating a call handle for the incoming call;

6   routing the incoming call to a port of a call handling system;

7   sending the call handle to the call handling system in association with the routed

8   call;

9   receiving a transfer of the routed call from the call handling system;

10   re-routing the incoming call back to a port of the call handling system; and

11   sending the call handle to the call handling system in association with the re-

12   routed call.

1   23.   The medium of claim 22, wherein the instructions for sending the call

2   handle comprise instructions which, when executed by the machine, cause the machine to

3   perform further operations comprising sending an identification message through a digital

4   interface.

1   24.   The medium of claim 23, wherein the digital interface comprises a digital

2   backplane connection to the call handling system.

1   25.   A method comprising:

2   a port to receive an incoming call;

3   a call handle generator to generate a call handle for the incoming call;

4   a switching network to route the incoming call to a port of a call handling system;

5   and

6   an interface to send the call handle to the call handling system in association with

7   the routed call.

1   26.   The apparatus of claim 25, wherein the interface comprises a digital

2   interface.

1   27.   The apparatus of claim 26, wherein the digital interface comprises a digital

2   backplane connection to the call handling system.